



ICS 2011 Abstract Form

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Abstract Title:

Compassionate Use of Intravesical Liposomes for One Subject with Ulcerative Interstitial Cystitis/Painful Bladder Syndrome

Abstract Text:

Hypothesis / aims of study

The investigators hypothesize that intravesical instillation of liposomes (LP) may form a molecular film on bladder ulcer surfaces in patients with ulcerative interstitial cystitis/painful bladder syndrome (IC/PBS) and provide a safe, effective, and minimally invasive treatment option for healing ulcers and alleviating symptoms. The present study was designed to assess the safety and clinical outcomes of 4 weekly bladder installations of LP as a compassionate use trial on a single subject with IC/PBS.

Study design, materials and methods

The subject was a 48 year old woman with ulcerative IC/PBS, first diagnosed in 2003. Symptoms include persistent urinary urgency, frequency, and pelvic pain. Past IC/PBS treatments have included medication administration, specifically ditropan, elmiron, bextra, hydroxyzine, pyridium and Cellcept as part of a clinical trial for IC. None of the previous treatments provided adequate or sustained relief. However temporary improvements were achieved after hydrodistention and cautery of ulcers in 2006, 2007, 2008, and 2009. The most recent hydrodistention/cautery took place in February 2009 for return of symptoms. Significant scarring and a persistent ulcerative lesion on the distal dome of the bladder were seen. Maximal bladder capacity was 425 cc, with terminal hematuria and multiple glomerulations were found throughout the bladder. The subject reported worsening of symptoms prior to LP treatment.

After obtaining informed consent, the subject received four weekly instillations of intravesical LP and was followed for 12 weeks for a total of 8 visits. Primary efficacy measurements of health related quality of life (HRQOL) included voiding diary, global response assessments (GRAs), and O'Leary Sant Interstitial Cystitis Symptom and Problem Index (ICSI-PI). Voiding diary entries recorded frequency, urgency, leakage and pelvic and/or bladder pain. Cystoscopy was performed pre and 8 weeks post installation.

Results

Participant responses indicated urine frequency decreased from a baseline mean of 18 episodes in 24 hours pre-treatment to a mean of 11.3 episodes in 24 hours 3 weeks after the first treatment and 12.6 episodes in 24 hours 8 weeks after the first instillation. The urgency score also decreased from a pre-instillation mean score of 1.75 (out of 10) to a mean score of 1.07 eight weeks after the final instillation. The number of unsuccessful voiding attempts fell from an average of once every two days prior to instillation to zero over the duration of treatment and after 8 weeks.

Cystoscopy noted 3 bladder ulcers pre treatment but decreased in bladder inflammation and no ulcers 8 weeks after final instillation (Figures 1a and 1b). A comparison of cystoscopy findings at the time of the initial instillation and 8 weeks post treatment revealed a marked improvement in bladder appearance. After four liposome treatments there were no distinct ulcers visualized. Specifically, the ulcer on the dome of the bladder appeared to be resolved. The erythema was also markedly improved.

Responses to ICSI and ICPI are illustrated in Figure 2. Both ICSI and ICPI fell notable over the course of treatment. Participant responses from the GRA, which asks the participant to select a statement that best describes current IC symptoms since beginning the treatment

with liposomes, indicate a slight improvement in IC/PBS symptoms across the duration of treatment.

No adverse events or treatment-related side effects were reported by the study participant at any time throughout the course of the study. The study participant denied experiencing any problems related to urinary functioning including gross hematuria, urinary retention, urgency, frequency and signs/symptoms of infection (i.e. odor, cloudiness and dysuria). Additionally, at the treatment visits, the study participant denied bladder irritation after liposome instillation and drainage. She was able to void without difficulty after the liposomes were drained from her bladder. Pelvic and bladder pain were routinely assessed at each visit and at multiple time points during the treatment visits. Overall the participant reported pain scores ranging from 0 to 2, on a scale from 0 (none) to 10 (“the worst pain you’ve ever experienced”).

Interpretation of results

Symptoms across multiple domains tested favourably with no side effects or adverse events during treatment and 8 weeks of follow-up.

Concluding message

A compassionate use IND of intravesical liposomal instillation was successfully completed in a patient with refractory ulcerative IC/PBS. The treatment is minimally invasive and presents an appealing new treatment for IC/PBS. Prospective multicenter randomized trials are needed to assess intravesical liposomes for IC/PBS.

Figure 1a: Pre Treatment Cystoscopic Images Figure 1b: Eight weeks Post LP Instillation

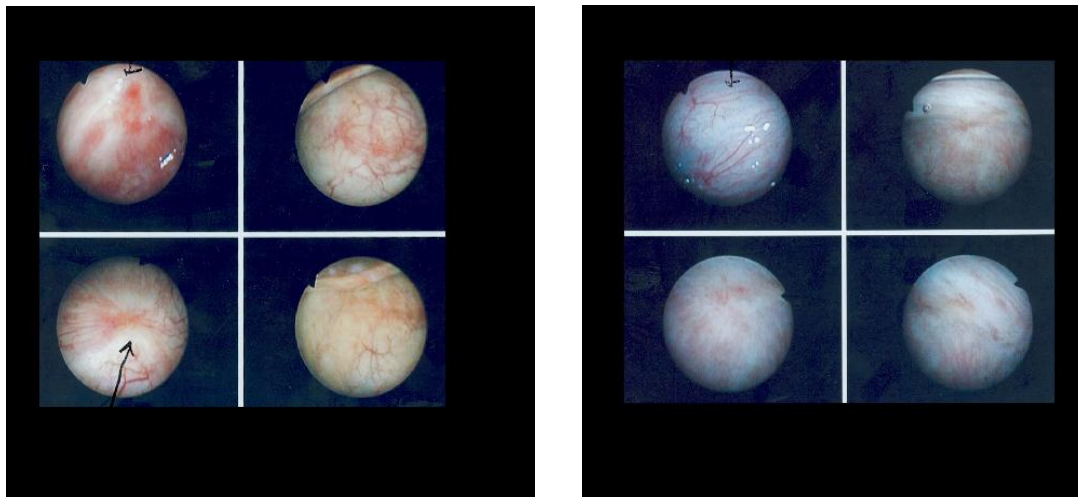


Figure 2: ICSI-PI Over Treatment Duration

